

QUARTERLY REPORT

31 January 2018

ASX Code: **ESE**

No. of pages: 13

QUARTERLY REPORT - FOR THE PERIOD ENDED 31 DECEMBER 2017

DETAILS OF ANNOUNCEMENT

- Quarterly Activity Report for the period ended 31 December 2017 (7 pages)
- Appendix 4C for the period ended 31 December 2017 (5 pages)

For and on behalf of the Board

Ian Pamensky
Company Secretary

FOR FURTHER INFORMATION:

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About eSense-Lab

eSense-Lab Ltd (ASX: ESE) is a life sciences company specialising in the commercialisation of the phytochemical profiling of plants. The Company combines genetics, mRNA, protein expression and phytochemical profiles to generate a comprehensive model of rare or high value plants. eSense-Lab can then use this model to 'reverse engineer' a terpene profile, which is a naturally occurring formulation of different individual terpenes which together account for many of the plant's health and medical benefits, whilst also exactly replicating the flavour, fragrance and other desired characteristics of the targeted plant, at a more sustainable and cheaper cost

To learn more about eSense-Lab, visit www.esense-lab.com

ASX ANNOUNCEMENT

ASX Code: ESE

31 January 2018

ESENSE-LAB QUARTERLY ACTIVITIES REPORT – 31 DECEMBER 2017

- *Binding agreement executed with IC ACCESS to develop products for the UAE market*
- *ATM Singapore obtains approvals allowing commencement of sales & distribution of eSense's product line within Singapore*
- *MOU signed with Young Henrys, an Australian brewery, to develop a beer infused with terpenes*
- *MOU signed with Progressive Brands, a company based in Netherlands with a brewery in Greece (Corinthian Brewery)*
- *'Beta' stage chocolate product developed under eSense's JV agreement with US specialty nutritional & supplement, manufacturing & marketing company Healthy Chocolate Florida LLC*
- *Maintained guidance with the R&D timeline presented to the market earlier in the quarter*
- *The R&D Team has worked to:*
 - *Open new R&D and production facility*
 - *Expand the R&D team to work in fully equipped laboratory;*
 - *Apply for permits to undertake cannabis research; and*
 - *Continue research of eSense's shelf products.*
- *Heavily over-subscribed placement of ~A1.62m completed, and a further A\$500,000 strategic investment from MMJ Phytotech Ltd (ASX: MMJ).*

Life sciences company **eSense-Lab Ltd** ("**eSense**" or the "**Company**"), (ASX:ESE), is pleased to provide an update on the Company's activities for the quarter ended 31 December 2017, along with the Appendix 4C.

During the period, eSense continued with revenue growth, cost optimisation and scaling efforts, to build a leading business-to-business (B2B) enterprise technology company while creating substantial shareholder value via our three-tiered approach:

1. Accelerating sales momentum:

- Signed sales agreements
- Immediate potential sales growth
- Additional product development with Allor
- Expanding footprint in Singapore
- Penetration into Europe
- Negotiation in new and emerging markets.

2. Continued investment in product and technology

- Expanding R&D team
- Improved technological innovations
- Engaging with leaders in the field for potential JV and collaborative opportunities
- Innovative product development for existing and new verticals

- Continual improvement on existing profiles.

3. Disciplined cost optimisation and controls

- Reduce monthly operating expenses via;
 - Increased margins from improved technology
 - Improved third party contracts.

eSense is a life sciences company commercialising proprietary plant-profiling technology that can be used to generate a comprehensive model of targeted plants. This technology “reverse engineers” rare or high value plants, and reconstructs the terpene profile of that plant, using alternate natural sources, in a more cost effective and sustainable way.

Terpenes are naturally occurring compounds, and account for the flavour, fragrance and other desired characteristics, as well as many of the medical and health benefits of plants. eSense’s replicated terpene profiles reconstruct the targeted plant to a similarity of 99.9%.

eSense had cash reserves of US\$2.425 million as at 31 December 2017 and will continue to actively pursue its commercialisation strategy.

The following activities occurred during the quarter:

- eSense signed a Binding Off-take Agreement with Singapore strategic partner, Advanced Technology Management Private Limited (“ATM”), for the distribution of eSense’s product line within Singapore. The agreement is for a Binding Conditional Off-take Agreement valued at a minimum of US\$540,000 to US\$600,000 within the first 12 months.

ATM is a leader in cross-border business development, advising in setting up and managing business centres in Asia. ATM has been owned and managed by the same team since establishment in 2007 and has a track record of providing independent advice to diverse corporate and technology sponsor clients from North America, Europe and Asia.

Subsequent to the quarter end, eSense announced that ATM Singapore had obtained approvals necessary for commencement of sales & distribution of eSense products within Singapore.

- The Company executed a Memorandum of Understanding (MOU) with Australian brewer, Young Henry’s Brewing Company Pty Ltd (“YHB”), for the development of a terpene-infused line of beer (“Product”).

Young Henry’s is both a brewery and distillery, offering an array of craft beers and ciders under a core range, as well as seasonal and limited releases and collaborative brews. YHB has also released its “New World” Australian gin, utilising techniques from both brewing and distillation. YHB has won numerous awards both internationally and locally, and its range of beers, ciders and spirits are available across the country at specialty stockists, and hotels and bars.

- The Company reached a key milestone in the development of its terpene-infused chocolate products, via its joint venture agreement (“JV”) with US food manufacturer Healthy Chocolate Florida LLC (“HCF”), being the finalisation of its ‘beta’ chocolate formulation.

The agreement with HCF, strengthens eSense’s footprint in the \$4.5B U.S. Retail Cannabis Market and advances key market verticals including Cannabis Nutraceuticals and Food and Beverages

HCF is a specialty nutrition and supplements manufacturing and marketing company with cutting-edge, in-house R&D capabilities to develop wellness, 4NOGUILT® branded products as well as white labelled products.

- eSense CTO Eyal Kalo reported progress on the following during the quarter:

Lab operation and gas chromatography built on a mass spectrometric detection unit (GC-MS¹) activity

- The Company's fully equipped laboratory is now operational, and the Company is working to expand the R&D team.
- Fully operated GC/MS system with activity around:
 - Building the Company's unique terpene library for terpene quantification- 23 terpenes have been identified, evaluated for quality and incorporated in to the library.
 - Refining the Company's terpene profiles to achieve more accurate terpene formulations.
 - Ongoing collaboration with US based 374 Labs² to refine the Company's first five cannabis strains based on old and new generated terpene analysis.

Ongoing research and development activity

- eSense's shelf products (nine terpene formulations) have been selected to enter in to a pre-clinical evaluation of:
 - a) Anti-inflammatory activity - Testing the effect of each formulation on the secretion of inflammatory mediators from macrophages (A well-known cellular model representing the immune system) - in progress
 - b) Bioavailability of Cannabidiol³ ("CBD") - Testing the effect of each formulation on CBD transfer through lipid membranes - in progress
 - c) Anti-Bacterial activity - Testing the anti-bacterial potential of our terpene formulations as standalone and in combination with CBD and other known potential etheric oils - Plan to enter activity by mid-February
 - d) Anti-Oxidant activity - Testing the anti-oxidant potential of our terpene formulations as standalone and in combination with CBD and other known potential etheric oils - Plan to enter activity by mid-February
- Attempting to achieve cannabis-oriented aroma as part of eSense's terpene formulations. Attempts are fully operated in two directions:
 - a) Using scientific data to formulate herbal based etheric oil mixtures to achieve Cannabis like aroma - in progress
 - b) GC/MS analysis, recipe and formulation of a well-known plant with a Cannabis like Aroma - In progress
- Preparing terpene-based e-liquid formulations for client, Allor Vaporizers LLC and other customers Including:
 - a) Formulating a terpene/flavor mixture - Various flavors (known fruits ad herbals) were matched to each one of eSense terpene blends based on their strain characteristics. Flavors were formulated in various ratios to achieve best balance between terpene aroma and flavor's taste.
 - b) Preparing terpene/flavor mixtures in e-Cig end formulations for customer tests including determination of PG/VG ratios coupled with formulation methods to achieve most balanced and stabilized end e-liquid formulations incorporated with terpenes and flavors.
 - c) Preparing unique terpene/flavor mixtures with cannabis oil for vaping- Collaboration with ongoing customer.

¹ https://en.wikipedia.org/wiki/Gas_chromatography-mass_spectrometry

² <http://www.374labs.com>

³ Cannabidiol—CBD—is a cannabis compound that has significant medical benefits, but does not make people feel "stoned" (<https://www.projectcbd.org/about/what-cbd>)

Production plan

- The Company has engaged Balirom⁴, an international flavour and fragrance company for the food industry. Balirom has a fully operational manufacturing facility dedicated to the Company's needs.
- Balirom has been selected as the Company's toll manufacturer with capabilities to manufacture up to 500 litres per day of terpene blends.

Subsequent to the quarter end:

- eSense signed a distribution and sales agreement with IC ACCESS ("IC"), a United Arab Emirates ("UAE") entity. eSense has agreed to produce terpenes profiles and to modify its line of products to suit the unique needs of the UAE market. In addition, the agreement provides for the potential future development of additional joint ventures between the parties for specific applications.

The binding agreement signed by IC is for a period of 3 years, with a commitment by IC to purchase Terpene Strains from eSense totalling AUD\$1,100,000 with a minimum commitment in the first year (commencing before 30 September 2018) of A\$366,000.

IC ACCESS is a boutique marketing and distribution firm. The working concept of the company, who operates in UAE, is to provide a full platform for foreign companies that aim to work in UAE. The company provides consulting, marketing plans, concepts design and re branding based on its experience and its strong connections in UAE. IC Access offers to take care on behalf of its clients through all the supply chain starts with import till the marketing of the product through local distributors, chains or shops.

- The Company signed a MOU with Progressive Brands BV, a Netherlands-based alcoholic beverages developer and manufacturer with a brewery in Greece (Corinthian Brewery).

Corinthian Brewery is the first microbrewery in the ancient Cretan city of Corinth. The beers produced are unpasteurised and unfiltered.

Corporate

- During the quarter, the Company completed a share placement of ~A\$1.62m to professional and sophisticated investors. The placement was completed by way of the issue of 6,478,000 CHES Depositary Interests (CDIs) over fully paid ordinary shares in the Company (Shares) at \$0.25 per CDI ("Placement"). Each CDI will represent one underlying Share.

In addition, the Company received a binding commitment from MMJ Phytotech Ltd⁵ (ASX: MMJ) for a strategic investment of A\$500,000, which will be completed by way of the issue of 2,500,000 CDI's at \$0.20 per CDI ("Strategic Investment"). MMJ will receive 1 free option for every 2 CDI's issued, at a \$0.30 exercise and expiry date of 3 years from date of issue, subject to shareholder approval.

Under the terms of the strategic investment, MMJ Phytotech Limited (ASX:MMJ) and Harvest One Cannabis Inc.⁶ (TSXV: HVST) have signed a Collaboration Agreement with eSense to develop new intellectual property and products specific to the recreational and medical cannabis markets, as well as utilising each Company's respective intellectual property and technologies to further enhance their existing technologies and product offerings.

⁴ http://www.balirom.com/index.php?page_id=3

⁵ <http://www.mmjphytotech.com.au>

⁶ <https://www.harvestone.com>

MMJ PhytoTech Limited (ASX: MMJ) is focused on becoming a large-scale cannabis producer, targeting direct supply to the growing Canadian medical and recreational markets which will have an estimated combined value of C\$8-9 billion by 2024. The Company controls operations across the entire medicinal cannabis value chain through its ~59% interest in TSX-V listed Harvest One Cannabis Inc (TSXV: HVST) and its 100% interest in Israeli research and development subsidiary, PhytoTech Therapeutics Ltd, both of which are strategically located in favourable jurisdictions with supportive regulatory frameworks in place.

Harvest One Cannabis Inc. (TSXV: HVST) controls operations across the entire cannabis value chain through three business units, with Harvest One serving as the umbrella company over horticultural arm United Greeneries and medical arm Satipharm AG. Each business is strategically located in favourable jurisdictions with supportive regulatory frameworks in place. United Greeneries has received a Canadian medicinal cannabis cultivation licence, making Harvest One one of only a few companies globally with the capacity to commercially cultivate cannabis in a federally regulated environment.

- During the quarter, the Company appointed a Yael Nadel as head scientist. Yael acquired her Ph.D. in Medicinal Chemistry from Bar-Ilan University. During her studies, Yael mastered in the Development of NPP1 and NTPDase2 Inhibitors. Yael developed new synthetic approaches coupled with a novel detection method based on HPLC to evaluate enzyme activity. In recent years, Yael gained an extensive expertise in development and validation of various analytical methods using GC-FID system. In addition, Yael managed a team of five people and was responsible for the flow and support of various GC/MS and GC-FID related analytical tests for customer services.
- Subsequent to the quarter end, Mr. Ian Pamensky was appointed as the Company Secretary.

- In accordance with ASX Listing Rule 6.1 confirmation previously given to the Company, eSense provides the following disclosure for the December 2017 quarter. The terms and conditions of the Performance Rights are disclosed in the Company's IPO Prospectus dated 22 December 2016 and were updated in ASX announcements lodged with the ASX just prior to the IPO on 14 February 2017.

Class of Performance Right	Number on Issue	Milestone	Date Milestone Achieved	Confirmation if any Rights converted during Period
Class A	3,000,000	If the volume weighted average market price of Shares calculated over the 20* consecutive trading days on which trades of Shares were recorded on ASX is A\$0.40 or higher.	n/a*	No
Class B	3,000,000	If the volume weighted average market price of Shares calculated over the 20 consecutive trading days on which trades of Shares were recorded on ASX is A\$0.60 or higher.	n/a	No
Class C	15,000,000	If the Company signs binding distribution contracts for its reconstructed Terpene Profiles with a cumulative value of A\$1 million within 12 months from the date of Admission.	Subsequent to the end of the quarter – 19 January 2018	Converted a portion*** of the Rights post the end of the quarter – 25 January 2018
Class D	15,000,000	If the Company generates cumulative revenue from the application of the Company's intellectual property and technology relating to the analysis and reconstruction of Terpene Profiles of A\$3 million within 24	n/a	No
Class E	10,111,311**	If the Company signs binding distribution contracts for its reconstructed Terpene Profiles with a cumulative value of A\$2 million within 18 months from the date of Admission	n/a	No

* In the Quarterly Report for the period 30 September 2017, this was reported incorrectly as being achieved. This was based on a 10-day VWAP per the Replacement Prospect, rather than a 20-day VWAP that the ASX requested at the time of admission to the ASX (refer ASX Announcement – 10 February 2017 – “Confirmation and Capital Structure”).

** To be issued on vesting of the Class C Performance Rights. 6,429,111 Class E Rights were issued subsequent to the end of the quarter on 25 January 2017, after the Class C Right holders made an election to convert.

*** 9,537,503 Class C Rights were converted to CDI, after the Right holders made the election to convert. The CDI's will be escrowed to 14 February 2019.

FOR FURTHER INFORMATION:

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Appendix 4C

Quarterly report for entities subject to Listing Rule 4.7B

Introduced 31/03/00 Amended 30/09/01, 24/10/05, 17/12/10, 01/09/16

Name of entity

eSense Lab Limited

ARBN

616 228 703

Quarter ended ("current quarter")

31 December 2017

Consolidated statement of cash flows	Current quarter \$US'000	Year to date (12 months) \$US'000
1. Cash flows from operating activities		
1.1 Receipts from customers	29	82
1.2 Payments for		
(a) research and development	(113)	(499)
(b) product manufacturing and operating costs	-	(33)
(c) advertising and marketing	(123)	(455)
(d) leased assets	(23)	(30)
(e) staff costs	(143)	(546)
(f) administration and corporate costs	(118)	(410)
1.3 Dividends received (see note 3)	-	-
1.4 Interest received	-	1
1.5 Interest and other costs of finance paid	(5)	(84)
1.6 Income taxes paid	-	
1.7 Government grants and tax incentives	-	
1.8 Other – VAT received	77	27
1.9 Net cash from / (used in) operating activities	(419)	(1,947)

2. Cash flows from investing activities		
2.1 Payments to acquire:		
(a) property, plant and equipment	(22)	(51)
(b) businesses (see item 10)	-	-
(c) investments	-	-

Consolidated statement of cash flows		Current quarter \$US'000	Year to date (12 months) \$US'000
	(d) intellectual property	-	-
	(e) other non-current assets	-	-
2.2	Proceeds from disposal of:		
	(a) property, plant and equipment	-	-
	(b) businesses (see item 10)	-	-
	(c) investments	-	-
	(d) intellectual property	-	-
	(e) other non-current assets	-	-
2.3	Cash flows from loans to other entities	-	-
2.4	Dividends received (see note 3)	-	-
2.5	Other – restricted bank deposits	-	(159)
2.6	Net cash from / (used in) investing activities	(22)	(210)

3.	Cash flows from financing activities		
3.1	Proceeds from issues of CDIs	1,606	4,286
3.2	Proceeds from issue of convertible notes	-	55
3.3	Proceeds from exercise of share options	-	-
3.4	Transaction costs related to issues of shares, convertible notes or options	(142)	(303)
3.5	Proceeds from borrowings	-	-
3.6	Repayment of borrowings	-	-
3.7	Transaction costs related to loans and borrowings	-	-
3.8	Dividends paid	-	-
3.9	Other (provide details if material)	-	-
3.10	Net cash from / (used in) financing activities	1,464	4,038

4.	Net increase / (decrease) in cash and cash equivalents for the period		
4.1	Cash and cash equivalents at beginning of quarter/year to date	1,368	477
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(419)	(1,947)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(22)	(210)
4.4	Net cash from / (used in) financing activities (item 3.10 above)	1,464	4,038

Consolidated statement of cash flows		Current quarter \$US'000	Year to date (12 months) \$US'000
4.5	Effect of movement in exchange rates on cash held	34	67
4.6	Cash and cash equivalents at end of quarter	2,425	2,425

5.	Reconciliation of cash and cash equivalents at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	Current quarter \$US'000	Previous quarter \$US'000
5.1	Bank balances	2,425	1,368
5.2	Call deposits	-	-
5.3	Bank overdrafts	-	-
5.4	Other (provide details)	-	-
5.5	Cash and cash equivalents at end of quarter (should equal item 4.6 above)	2,425 *	1,368 *

* Excludes security deposits of \$US165,000 for assets purchased and the company credit cards. These funds are restricted.

6.	Payments to directors of the entity and their associates	Current quarter \$US'000
6.1	Aggregate amount of payments to these parties included in item 1.2	280
6.2	Aggregate amount of cash flow from loans to these parties included in item 2.3	-
6.3	Include below any explanation necessary to understand the transactions included in items 6.1 and 6.2	

All transactions involving Directors and associates were on normal commercial terms. These payments represent Director fees, Director consulting fees, reimbursements of expenses, capital raising costs and payments to a Directors related entity for accounting services.

Year to date amount is US\$840K

7.	Payments to related entities of the entity and their associates	Current quarter \$US'000
7.1	Aggregate amount of payments to these parties included in item 1.2	-
7.2	Aggregate amount of cash flow from loans to these parties included in item 2.3	-
7.3	Include below any explanation necessary to understand the transactions included in items 7.1 and 7.2	
N/A		

8. Financing facilities available <i>Add notes as necessary for an understanding of the position</i>	Total facility amount at quarter end \$US'000	Amount drawn at quarter end \$US'000
8.1 Loan facilities	-	-
8.2 Credit standby arrangements	-	-
8.3 Other (please specify)	-	-
8.4 Include below a description of each facility above, including the lender, interest rate and whether it is secured or unsecured. If any additional facilities have been entered into or are proposed to be entered into after quarter end, include details of those facilities as well.		
None		

9. Estimated cash outflows for next quarter	\$US'000
9.1 Research and development	(129)
9.2 Product manufacturing and operating costs	-
9.3 Advertising and marketing	(125)
9.4 Leased assets	(22)
9.5 Staff costs	(158)
9.6 Administration and corporate costs	(41)
9.7 Other (provide details if material)	-
9.8 Total estimated cash outflows	(475)

10. Acquisitions and disposals of business entities (items 2.1(b) and 2.2(b) above)	Acquisitions	Disposals
10.1 Name of entity	-	-
10.2 Place of incorporation or registration	-	-
10.3 Consideration for acquisition or disposal	-	-
10.4 Total net assets	-	-
10.5 Nature of business	-	-

Compliance statement

- 1 This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.
- 2 This statement gives a true and fair view of the matters disclosed.

Sign here:
(Director/Company secretary)

Date: **31 January 2018**

Print name: **Ian Pamensky**

Notes

1. The quarterly report provides a basis for informing the market how the entity's activities have been financed for the past quarter and the effect on its cash position. An entity that wishes to disclose additional information is encouraged to do so, in a note or notes included in or attached to this report.
2. If this quarterly report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, *AASB 107: Statement of Cash Flows* apply to this report. If this quarterly report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standard applies to this report.
3. Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.